

WHAT IS CLAIMED IS:

1. A composition for the inhibition of heparanase glycosidase catalytic activity, comprising as an active ingredient any one of eosinophil cell lysate, at least one eosinophil secondary granules basic protein or any functional fragment thereof, poly-L-arginine and any combination thereof, said composition optionally further comprising a pharmaceutically acceptable carrier, diluent, excipient and/or additive.
2. The composition according to claim 1, wherein said eosinophil secondary granules basic protein is selected from the group consisting of MBP (Major Basic Protein), ECP (Eosinophil Cationic Protein), EPO (Eosinophil Peroxidase) and EDN (Eosinophil Derived Neurotoxin).
3. The composition according to claim 2, for the inhibition of heparanase glycosidase catalytic activity, comprising as an active ingredient an inhibitory effective amount of MBP (Major Basic Protein) or any functional fragment thereof, and optionally a pharmaceutically acceptable carrier, diluent, excipient and/or additive.
4. The composition according to claim 2, wherein said eosinophil secondary granules basic protein or any functional fragment thereof is provided as any one of a purified recombinant protein, a fusion protein, a nucleic acid construct encoding for said protein, a host cell expressing said construct, a cell, a cell line and tissue endogeneously expressing said protein or any lysates thereof.
5. A pharmaceutical composition for the treatment or the inhibition of a process or a pathologic disorder associated with heparanase catalytic activity comprising as an active ingredient any one of eosinophil cell lysate, at least one eosinophil secondary granules basic protein or any functional fragment thereof, poly-L-arginine and any combination thereof, in an amount sufficient for the inhibition of heparanase glycosidase catalytic activity, said composition optionally

further comprising a pharmaceutically acceptable carrier, diluent, excipient and/or additive.

6. The pharmaceutical composition according to claim 5, wherein said eosinophil secondary granules basic protein is selected from the group consisting of MBP (Major Basic Protein), ECP (Eosinophil Cationic Protein), EPO (Eosinophil Peroxidase) and EDN (Eosinophil Derived Neurotoxin).

7. The pharmaceutical composition according to claim 6, for the inhibition or the treatment of a process or a pathologic disorder associated with heparanase glycosidase catalytic activity comprising as an active ingredient a MBP (Major Basic Protein) or any functional fragment thereof in an amount sufficient for the inhibition of heparanase catalytic activity.

8. The pharmaceutical composition according to claim 6, wherein said eosinophil secondary granules basic protein or any functional fragment thereof is provided as any one of a purified recombinant protein, a fusion protein, a nucleic acid construct encoding for said protein, a host cell expressing said construct, a cell, a cell line and tissue endogeneously expressing said protein or any lysates thereof.

9. The pharmaceutical composition according to claim 5, wherein said process-associated with heparanase catalytic activity is any one of angiogenesis, tumor formation, tumor progression and tumor metastasis.

10. The pharmaceutical composition according to claim 5, wherein said pathologic disorder associated with heparanase catalytic activity is malignant proliferative disorder.

11. The pharmaceutical composition according to claim 10, wherein said malignant proliferative disorder is any one of solid and non-solid tumor selected

from the group consisting of carcinoma, sarcoma, melanoma, leukemia, and lymphoma.

12. The pharmaceutical composition according to claim 11, wherein said malignant proliferative disorder is melanoma.

13. The pharmaceutical composition according to claim 5, wherein said pathologic disorder associated with heparanase catalytic activity is any one of inflammatory disorder and autoimmune disorder.

14. A method for the inhibition of heparanase glycosidase catalytic activity comprising the step of contacting heparanase under suitable conditions, with an inhibitory effective amount of any one of eosinophil cell lysate, at least one eosinophil secondary granules basic protein or any functional fragments thereof, poly-L-arginine and any combination thereof, or with a composition comprising the same.

15. The method according to claim 14, wherein said heparanase is provided as any one of a purified recombinant heparanase protein, a fusion heparanase protein, a nucleic acid construct encoding for heparanase, a host cell expressing said construct, a cell, a cell line and a tissue endogeneously expressing the active form of heparanase, or any lysates thereof.

16. A method for the inhibition of heparanase glycosidase catalytic activity in a subject in need thereof comprising the step of administering to said subject an inhibitory effective amount of any one of eosinophil cell lysate, at least one eosinophil secondary granules basic protein or any functional fragments thereof, poly-L-arginine and any combination thereof, or of a composition comprising the same.

17. The method according to claim 15, wherein said eosinophil secondary granules basic protein is selected from the group consisting of MBP (Major Basic Protein), ECP (Eosinophil Cationic Protein), EPO (Eosinophil Peroxidase) and EDN (Eosinophil Derived Neurotoxin).

18. The method according to claim 17, wherein said eosinophil secondary granules basic protein is MBP (Major Basic Protein) or any functional fragment thereof.

19. The method according to claim 17, wherein said eosinophil secondary granules basic protein or any functional fragment thereof is provided as any one of a purified recombinant protein, a fusion protein, a nucleic acid construct encoding for said protein, a host cell expressing said construct, a cell, a cell line and a tissue endogeneously expressing said protein or any lysates thereof.

20. A method for the inhibition or the treatment of a process or a pathologic disorder associated with heparanase glycosidase catalytic activity comprising the step of administering to a subject in need thereof a therapeutically effective amount of any one of eosinophil cell lysate, at least one eosinophil secondary granules basic protein or any functional fragments thereof, poly-L-arginine and any combination thereof, or of a composition comprising the same.

21. The method according to claim 20, wherein said eosinophil secondary granules basic protein is selected from the group consisting of MBP (Major Basic Protein), ECP (Eosinophil Cationic Protein), EPO (Eosinophil Peroxidase) and EDN (Eosinophil Derived Neurotoxin).

22. The method according to claim 21, wherein said eosinophil secondary granules basic protein is MBP (Major Basic Protein) or any functional fragment thereof.

23. The method according to claim 21, wherein said eosinophil secondary granules basic protein or any functional fragment thereof is provided as any one of a purified recombinant protein, a fusion protein, a nucleic acid construct encoding for said protein, a host cell expressing said construct, a cell, a cell line and a tissue endogeneously expressing said protein or any lysates thereof.

24. The method according to claim 23, wherein said process associated with heparanase glycosidase catalytic activity is any one of angiogenesis, tumor formation, tumor progression and tumor metastasis.

25. The method according to claim 23, wherein said pathologic disorder associated with heparanase glycosidase catalytic activity is malignant proliferative disorder.

26. The method according to claim 25, wherein said malignant proliferative disorder is any one of solid and non-solid tumor selected from the group consisting of carcinoma, melanoma, leukemia, and lymphoma.

27. The method according to claim 26, wherein said malignant proliferative disorder is melanoma.

28. The method according to claim 25, wherein said pathologic disorder associated with heparanase catalytic activity is any one of inflammatory disorder and autoimmune disorder.

29. Method for the inhibition of heparanase glycosidase catalytic activity comprising the step of using any one of eosinophil cell lysate, at least one eosinophil secondary granules basic protein or any functional fragment thereof, poly-L-arginine and any combination thereof.

30. Method for preparation of a composition for the inhibition of heparanase glycosidase catalytic activity comprising the step of using any one of eosinophil cell lysate; at least one eosinophil secondary granules basic protein or any functional fragment thereof, poly-L-arginine and any combination thereof.
31. The method according to claim 29, wherein said composition is as defined according to claim 1.
32. The method according to claim 30, wherein said composition is as defined according to claim 1.
33. Method for preparation of a pharmaceutical composition for the treatment or the inhibition of a process or a pathologic disorder associated with heparanase glycosidase catalytic activity comprising the steps of using any one of eosinophil cell lysate, at least one eosinophil secondary granules basic protein or any functional fragment thereof, poly-L-arginine and any combination thereof, said composition optionally further comprising a pharmaceutically acceptable carrier, diluent, excipient and/or additive.
34. The use according to claim 32, wherein said composition is as defined in claim 5.
35. The method according to claim 30, of using MBP (Major Basic Protein) or any functional fragment thereof, in an amount sufficient for the inhibition of heparanase catalytic activity, in the method for preparation of a pharmaceutical composition for the inhibition or the treatment of a process or a pathologic disorder associated with heparanase catalytic activity.
36. The method according to claim 33, of using MBP (Major Basic Protein) or any functional fragment thereof, in an amount sufficient for the inhibition of heparanase catalytic activity, in the method for preparation of a pharmaceutical

composition for the inhibition or the treatment of a process or a pathologic disorder associated with heparanase catalytic activity.

37. The method according to claim 33, wherein said eosinophil secondary granules basic protein or any functional fragment thereof is provided as any one of a purified recombinant protein, a fusion protein, a nucleic acid construct encoding for said protein, a host cell expressing said construct, a cell, a cell line and a tissue endogeneously expressing said protein or any lysates thereof.